

U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-04-076 -EA

CASEFILE/PROJECT NUMBER (optional):

PROJECT NAME: Kuck Shelter 5RB3157

LEGAL DESCRIPTION: T2S R100W Sec 31

APPLICANT: BLM AND WESTERN WYOMING COLLEGE

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: From 2000 to 2003 Western Wyoming College and the White River Field Office of the Bureau of Land Management, conducted extensive excavations in the upper reaches of East Douglas Creek Tributary at the Kuck Site (5RB3157). The Kuck Site is located in a rock shelter at the base of a south-facing cliff face. The shelter is located in a transitional zone. The area is dominated by a Juniper forest with Piñon trees and a few Gambles Oaks located in the immediate area. To the south, Bowman Canyon opens up into the valley of East Douglas Creek. The valley of East Douglas is at 6175 feet. Kuck Site sits at 6600 feet.

The site is a rare example of a Fremont period Rockshelter which has survived intact and it is strategically located with access to a variety of plant resources. Efforts during the excavation phase centered around one intact shelter that contained the remains of an extensive wooden structure. A total of 33m² were excavated to bedrock inside and outside of the structure. Based on the excavations it appears that there were three distinct occupations at this site. The first period spans 3230 to 5330 years B.P. The second period spans 1540 to 1760 B.P, and the third period spans 1090 to 1140 B.P. The Fremont Occupation has the tightest cluster of radio carbon dates. In addition to the radio carbon assays, this occupation also produced a tree ring date of A.D 951.

Sometime during the Fremont occupation a two-room structure constructed from wood was built. Thatch covered at least some of the exterior and some of this thatch appears to have been covered with daub. Among the faunal remains recovered were wolf and bison. The macro-floral recoveries made consist of sun flower, Chenopodium, maize, and gambles oak. Although a multi-component site the Fremont component is the most extensively represented in the artifact Assemblage.

Plant resources recovered come from a variety of vegetative zones. The pollen and macro-floral materials provide an illustration of the diversity of plant resources used at the site. During the excavation corn kernels and two corn cobs were recovered. The two corn cobs had numerous signatures that are in keeping with “the type of maize grown during the Fremont occupation.” The macro-floral remains from a clay-lined hearth that dated to A.D. 900 (Beta 159365) indicated that cultivated maize was being processed at the site. One mano, found elsewhere at the site, was washed to determine what types of plants were processed with the tool. The pollen wash of the mano produced an “elevated cheno-am pollen frequency.” There was also an elevated quantity of “High-spine Asteracea pollen and the Poacea pollen frequency were slightly elevated.” On the mano “the pollen record is consistent with grinding cheno-am seeds, as well as possibly grass seeds and perhaps seeds of the sunflower family.”

Piñon groves are located on north slopes of ridges and hills. These groves are sizeable and are evident on most of the large ridge systems that trend east and west in the area. Numerous large Piñon groves are within a 1 kilometer radius of the site. While Quercas (gambles oak) is evident in well watered areas near the site, large groves of gambles oak are evident on the Cathedral Bluffs. Mountain Mahogany is also present at the higher elevations. As a long-term habitation, this site has the benefit of being close to a variety of plant resources.

Wooden poles, woven grass walls and bark sleeping mats were also found among intact cultural deposits sealed off by fallen roof spalls. During the recovery process the wooden super structure was mapped then removed. Among the faunal remains recovered were wolf and bison. The importance of this Site to understanding habitation strategies in relation to plant resource utilization in a transitional zone is singular and cannot be underestimated. Analysis of recovered materials is on going and requires us to revisit the Site in the summer of 2004.

Proposed Action: Excavations have now been completed. During the summer of 2004 Western Wyoming College and the White River Field Office propose to finish recording the wooden beam cuts and modifications, take pollen samples from the surface and fill in areas that have subsided to insure that backfill does not subside. Of the three items the recordation of beam cuts and modifications are the most critical to our understanding of the sites construction and use. The work will be completed between July 1 and October 3. The work is expected to be completed in fourteen days over that period of time. Five to ten people will take part in the work. Travel will follow the existing road to the pipeline vehicular closure gate where all vehicles will be parked. The remainder of the distance to the site will be on foot. Any camping will take place at the already disturbed campsite used during the excavation of the site. Equipment will consist of shovels, measuring devices, trowels, bags and pollen removal equipment (trowels, spoons).

No Action Alternative: The no action alternative would deny this proposal and hence the collection of data that is critical to our understanding of Fremont occupations and utilization of plant resources in transitional zones.

NEED FOR THE ACTION: To finish recording the wooden beam cuts and modifications, take pollen samples from the surface and fill in areas that have subsided to insure that backfill

does not subside. The recordation of beam cuts and modifications are the most critical to our understanding of the sites construction and use.

PLAN CONFORMANCE REVIEW:

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: 2-89, 90

Decision Language: “Under all alternatives, excavation permits would be issued to qualified applicants for scientific or educational purposes....Excavation permits for the protection of archaeological data from cultural resources would also be issued to qualified applicants.”

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

CRITICAL ELEMENTS

CULTURAL RESOURCES

Affected Environment: A few surface soil samples for pollen analysis will be taken. and All logs used in construction in the Kuck Shelter will be photographed and recorded.

Environmental Consequences of the Proposed Action: To insure previous backfill efforts provided adequate coverage of intact cultural deposits.

Environmental Consequences of the No Action Alternative: It is important to follow up on backfilling as erosion after the first year often exposes critical areas.

Mitigation: Insure that the area is stable and all elements of the backfill cover intact cultural deposits.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The project area is pinyon/juniper and rock outcrop. On both of these sites soils are shallow to non existent. Noxious weed inventory of this site has not shown any noxious weeds on site or in the near vicinity. The austere growing conditions would prevent invasion of noxious weeds.

Environmental Consequences of the Proposed Action: The proposed action would not require any reclamation, nor are there any noxious weed concerns.

Environmental Consequences of the No Action Alternative: There would be no impacts.

Mitigation: None

MIGRATORY BIRDS

Affected Environment: An extensive array of migratory birds nest in these pinyon-juniper woodlands from mid-May through early July. Those species identified as having higher conservation interest (i.e., Rocky Mountain Bird Observatory, Partners in Flight program), including: gray flycatcher, pinyon jay, juniper titmouse, black-throated gray warbler, and violet-green swallow are common and widely distributed in extensive suitable woodlands across the Resource Area and region.

Environmental Consequences of the Proposed Action: The proposed action would have no notable consequences on breeding bird populations in the project vicinity. The confined hand-tool work would involve very little of the normal breeding season (14 days of work between July 1 and October 3), with only a small group of people intermittently accessing the work site by foot.

Environmental Consequences of the No Action Alternative: There would be no potential to intermittently and briefly disrupt very few, if any, nesting functions of migratory birds late in the nesting season.

Mitigation: none

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: No threatened or endangered plants are present in, or in the vicinity of, the proposed project area.

Environmental Consequences of the Proposed Action: None

Environmental Consequences of the No Action Alternative: None

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species:
There is no reasonable likelihood that the proposed action or no action alternative would have an influence on the condition or function of Threatened, Endangered, or Sensitive plant species. Thus there would be no effect on achieving the land health standard.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at this site.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: The operator shall be required to collect and properly dispose of any solid wastes generated by this project.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED: No ACEC's, flood plains, riparian or wetland systems, prime and unique farmlands, Wilderness, or Wild and Scenic Rivers exist within the area affected by the proposed action. Impacts to air and water quality are not anticipated; currently water quality meets the Land Health Standards and would continue to meet the standard as a result of the proposed action. The Public Land Health Standard for wetland and riparian systems is not applicable to this action; T & E animals would not be affected since neither the proposed nor the no-action alternatives have any influence on populations of, or habitats potentially occupied by, special status animals. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: The soils have been mapped in an order III soil survey by NRCS and are available from that office for review. The Kuck Shelter is in soil mapping unit #10; Blazon, moist-Rentsac complex, on slopes 8 to 65 percent slopes. The Blazon soil is shallow and well drained. It formed in residuum derived dominantly from shale. Typically, the upper part of the surface layer is brown channery loam about 4 inches thick. Permeability of the Blazon soil is moderately slow. Available water capacity is low. Effective rooting depth is 10 to 20 inches. Runoff is rapid, and the hazard of water erosion is moderate to very high. The Rentsac soil is also shallow and well drained. Typically, the surface layer is grayish brown channery loam about 5 inches thick. Depth to sandstone ranges from 10 to 20 inches. Permeability of the Rentsac soil is moderately rapid. Available water capacity is low. Effective rooting depth is 10 to 20 inches. Runoff is rapid, and the hazard of water erosion is moderate to very high. This map unit is a Pinyon-Juniper woodland ecological site.

Environmental Consequences of the Proposed Action: Moving soil to stabilize the shelter would actually help keep soils on site. Impacts to soil resources as a result of the proposed action would be very minor.

Environmental Consequences of the No Action Alternative: Impacts are not anticipated from the no-action alternative.

Mitigation: None

Finding on the Public Land Health Standard for upland soils: The soils in the area are meeting the Land Health Standards and would continue to do so as a result of the proposed action.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The project area is a pinyon/juniper association. Overstory vegetation is of mature pinyon and Utah juniper with a sparse understory.

Environmental Consequences of the Proposed Action: No adverse impacts are expected.

Environmental Consequences of the No Action Alternative: There would be no impacts.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The plant community on site meet the Public Land Health Standards.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: Aquatic habitats associated with East Douglas Creek are located about 1 mile west of the proposed action. This perennial willow-dominated system is occupied extensively by beaver, the ponds and intervening channels of which are intermittently inhabited by speckled dace—a widely distributed and common native non-game fish.

Environmental Consequences of the Proposed Action: The proposed action, essentially intermittent foot traffic by a small group of persons, would have no conceivable influence on aquatic habitats, the nearest of which is more than 1 mile distant.

Environmental Consequences of the No Action Alternative: There would be no change in current conditions and no further impacts to aquatic habitats in East Douglas Creek.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): Aquatic habitats associated with East Douglas Creek are in proper functioning condition and meet the public land health standard for animal communities. Since the proposed action would have no conceivable affect on aquatic habitats, the project would have no influence on the status of the public health land standard.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: Deer and elk use the project area primarily during the early to mid winter months and again in early spring. There are no critical use habitats or functions served in the project area.

Environmental Consequences of the Proposed Action: Although the project would extend intermittently into the period of big game occupation (later September and early October), low-intensity and short-term use by a small group of people confined to a discrete project site would have virtually no adverse affect on big game beginning to arrive on these winter ranges.

Environmental Consequences of the No Action Alternative: Local conditions on these big game winter ranges would remain unchanged and there would be no potential for diminutive impacts attributable to this casual use.

Mitigation: none

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): Extensive upland woodlands encompassing the project site meet the public land health standard for animal communities. Since the proposed action would have no conceivable adverse affect on these terrestrial habitats, the project would have no influence on the status of the public health land standard.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation		X	
Cadastral Survey	X		
Fire Management		X	
Forest Management		X	
Geology and Minerals	X		
Hydrology/Water Rights	X		
Law Enforcement		X	
Paleontology			X
Rangeland Management		X	
Realty Authorizations			X
Recreation		X	
Socio-Economics		X	
Visual Resources		X	
Wild Horses	X		

PALEONTOLOGY

Affected Environment: Kuck Shelter is located in the Class I geologic unit Mesaverde which has an undetermined potential for producing scientifically important fossils.

Environmental Consequences of the Proposed Action: The proposed action does not appear to have the potential to impact scientifically important fossils

Environmental Consequences of the No Action Alternative: There would not be any impacts to fossil resources under the No Action Alternative.

Mitigation: If paleontological materials (fossils) are uncovered during project activities, the operator is to immediately stop activities that might further disturb such materials, and contact the authorized officer (AO). The operator and the authorized officer will consult and determine the best option for avoiding or mitigating paleontological site damage.

REALTY AUTHORIZATIONS

Affected Environment: There are two major transportation pipelines, COC52705 Colorado Interstate Gas Company (CIG) and COC0123685 Questar Pipeline Company, that could be impacted by this action.

Environmental Consequences of the Proposed Action: The proposed action has vehicle traffic using a segment of the pipeline rights-of-way as an access road from the well pad to the point where a gate is proposed to close off the rest of the route. The two pipelines are high pressure in volume and could be considered a safety hazard to the environment and the public should a rupture occur. The holder needs to notify CIG and Questar that they are going to be using the right-of-way for access purposes to the Kuck Shelter and inform them that there are plans to close off a portion of the right-of-way to limit access to this site.

Environmental Consequences of the No Action Alternative: The no-action alternative would not allow use of the pipeline rights-of-way for access and a different access point would have to be found.

Mitigation: Limit the number vehicles driving on the pipeline rights-of-way to one a day and from the closure point, all travel must be by foot or horse back. No vehicular travel beyond the closure point will be allowed.

Contact must be made with the pipeline companies regarding the closure point providing them with an explanation as to why the closure is occurring.

PERSONS / AGENCIES CONSULTED:
INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Caroline Hollowed	Hydrologist	Air Quality
Tamara Meagley	NRS	Areas of Critical Environmental Concern
Tamara Meagley	NRS	Threatened and Endangered Plant Species
Gabrielle Elliott	Archaeologist	Cultural Resources Paleontological Resources
Robert Fowler	Forester	Invasive, Non-Native Species
Ed Hollowed	Wildlife Biologist	Migratory Birds
Ed Hollowed	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species, Wildlife
Marty O'Mara	Hazmat Collateral	Wastes, Hazardous or Solid
Caroline Hollowed	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Caroline Hollowed	Hydrologist	Wetlands and Riparian Zones
Chris Ham	ORP	Wilderness
Caroline Hollowed	Hydrologist	Soils
Robert Fowler	Forester	Vegetation
Ed Hollowed	Wildlife Biologist	Wildlife Terrestrial and Aquatic
Chris Ham	ORP	Access and Transportation
Ken Holsinger	NRS	Fire Management

Name	Title	Area of Responsibility
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Robert Fowler	Forester	Rangeland Management
Penny Brown	Realty Specialist	Realty Authorizations
Chris Ham	ORP	Recreation
Chris Ham	ORP	Visual Resources
Valerie Dobrich	NRS	Wild Horses

Finding of No Significant Impact/Decision Record (FONSI/DR)

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FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to approve finishing the recordings of the Kuck Shelter 5RB3157 with the mitigation measures listed below. This development, with mitigation, is consistent with the decisions in the White River ROD/RMP, and environmental impacts will be minimal.


MITIGATION MEASURES:

1. Insure that the area is stable and all elements of the backfill cover intact cultural deposits.
2. The operator shall be required to collect and properly dispose of any solid wastes generated by this project.
3. If paleontological materials (fossils) are uncovered during project activities, the operator is to immediately stop activities that might further disturb such materials, and contact the authorized officer (AO). The operator and the authorized officer will consult and determine the best option for avoiding or mitigating paleontological site damage.

4. Limit the number vehicles driving on the pipeline rights-of-way to one a day and from the closure point, all travel must be by foot or horse back. No vehicular travel beyond the closure point will be allowed.

5. Contact must be made with the pipeline companies regarding the closure point providing them with an explanation as to why the closure is occurring.

COMPLIANCE/MONITORING: N/A

NAME OF PREPARER: 

NAME OF ENVIRONMENTAL COORDINATOR:  Followed 6/14/04

SIGNATURE OF AUTHORIZED OFFICIAL: 
Field Manager

DATE SIGNED: 6/16/04

ATTACHMENTS: Map of the Location of the Proposed Action

Location of Proposed Action CO-110-2004-076-EA

